

# I-15 EAST MISSION ROAD

## DIRECTIONS TO SITE

TAKE RAMP ONTO I-5 N. GO 6.2 MI. TAKE THE ANAHEIM/RIVERSIDE EXIT ONTO CA-55 N. GO 7.4 MI. TAKE THE RIVERSIDE EXIT ONTO CA-91 E. GO 16.8 MI. TAKE THE BARSTOW/SAN DIEGO EXIT ONTO I-15 5 TOWARD SAN DIEGO. GO 41.9 MI. TAKE EXIT #54/RAINBOW VALLEY BLVD. GO 0.4 MI. TURN LEFT ON W RAINBOW VALLEY BLVD. GO 0.2 MI. TURN RIGHT ON OLD HIGHWAY 395. GO 2.6 MI. TURN LEFT ON WHITE LILAC RD. GO 0.1 MI. ARRIVE AT 4230 WHITE LILAC RD, FALLBROOK, ON THE LEFT.

## DRIVING DIRECTIONS

	NEW ANTENNA		LIGHT POLE		ELEVATION REF.		ELECT. CONDUIT		PLASTER (E) MASONRY
	EXISTING ANTENNA		FOUNDATION		SECTION REF.		COAXIAL CABLE		CONCRETE
	GROUND ROD		SPOT ELEV.		PROP./LEASE LINE		OVERHEAD SERV. CONDUCTORS		EARTH
	GROUND BUS BAR		SET POINT		MATCH LINE		CHAIN LINK FENCE		GRAVEL PLYWOOD
	MECH. GRND. CONN.		REVISION		WORK POINT		CENTERLINE		SAND
	CADWELD		GRID REF.		GRND. CONDUCTOR		WOOD CONT.		STEEL
	GROUND ACC. WELL		DETAIL REF.		TELE. CONDUIT		WOOD BLOCKING		
	ELECTRIC BOX								
	TELEPHONE BOX								

## SYMBOLS, LINETYPES AND HATCH PATTERNS

## PLAN VERIFICATION

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

## GENERAL CONTRACTOR NOTES

THIS PROPOSED PROJECT CONSISTS OF THE INSTALLATION OF A 30 KW KOHLER EMERGENCY BACKUP GENERATOR OUTSIDE A VERIZON WIRELESS EXISTING UNMANNED TELECOMMUNICATIONS FACILITY. THIS GENERATOR WOULD RUN IN THE EVENT OF A MAJOR CATASTROPHE CAUSING COMMERCIAL POWER FAILURE.

## PROJECT DESCRIPTION

T-1	TITLE SHEET
A-1	SITE PLAN
A-2	DETAILED SITE PLAN
A-3	ARCHITECTURAL ELEVATIONS
A-4	GENERATOR SPECIFICATIONS

THE PERMIT APPLICANT ACKNOWLEDGES THAT THIS PROJECT PROPERTY IS ZONED A70 AND SURROUNDING PROPERTIES ZONED A70 AND WILL BE REQUIRED TO COMPLY WITH THE ONE-HOUR SOUND LEVEL LIMITS OF CHAPTER 4 (NOISE ABATEMENT AND CONTROL) IN TITLE 3, DIVISION 6 OF THE SAN DIEGO COUNTY CODE OF REGULATORY ORDINANCES. FOR THIS PROJECT PROPERTY, THE MOST STRINGENT DAYTIME HOURLY LIMIT AT ANY PROPERTY LINE IS 50 DECIBELS (DBA) AND FOR NIGHTTIME CONDITIONS THIS HOURLY LIMIT IS 45 DECIBELS (DBA). AS SUCH, IT IS SOLELY THE RESPONSIBILITY OF THE APPLICANT TO ENSURE COMPLIANCE WITH THESE STANDARDS. THE PROPERTY OWNER SHALL CORRECT ANY REPORTED NOISE VIOLATION OF THE APPLICABLE SOUND LEVEL LIMITS WITHIN 30 DAYS OF WRITTEN NOTIFICATION BY THE COUNTY.

AC.	ASPHALT CONCRETE	GVL.	GRAVEL
ANT.	ANTENNA(S)	HC.	HANDICAPPED
BEL.	BELOW	HORIZ.	HORIZONTAL
B.G.	BELOW GRADE	HT.	HEIGHT
BLD'G.	BUILDING	HVAC.	HTG./ VENT./ A/C
B.M.	BENCH MARK	INCL.	INCLUDE
BRK.	BRICK	LBS.	POUNDS
CAB.	CABINET	LPT.	LOW POINT
C.B.	CATCH BASIN	MAS.	MASONRY
CEM.	CEMENT	MAX.	MAXIMUM
CFT.	CUBIC FOOT	MET.	METAL
C.I.P.C.	CAST-IN-PLACE CONC.	MFR.	MANUFACTURER
C.L.L.	CONTRACT LIMIT LINE	MIN.	MINIMUM
CLS.	CLOSURE	(N)	NEW
C.M.U.	CONC. MASONRY UNIT	N	NORTH
CONC.	CONCRETE	N.I.C.	NOT IN CONTRACT
CONN.	CONNECTION	N.T.S.	NOT TO SCALE
CONST.	CONSTRUCTION	P.P.	POWER POLE
CTR.	CENTER	P.L.	PROPERTY LINE
CYD.	CUBIC YARD	P.O.C.	POINT OF CONN.
DBL.	DOUBLE	PROP.	PROPERTY
DEMO.	DEMOLITION	PT.	POINT
DIM.	DIMENSION	PVMT.	PAVEMENT
DRWG.	DRAWING	REQD.	REQUIRED
DTL.	DETAIL	RFH.	ROOF HATCH
(E)	EXISTING	RFG.	ROOFING
E	EAST	R.O.W.	RIGHT-OF-WAY
E.L.	ELEVATION	S	SOUTH
ELEC.	ELECTRIC (AL)	TEL.	TELEPHONE
ENCL.	ENCLOSURE	T.O.P.	TOP OF PARAPET
E.P.	ELECT. PANELBOARD	T.O.S.	TOP OF SLAB (SURFACE)
EQUIP.	EQUIPMENT	T.O.W.	TOP OF WALL
EX.	EXISTING	TYP.	TYPICAL
EXT.	EXTERIOR	UNF.	UNFINISHED
FS.	FINISH SURFACE	U.N.O.	UNLESS NOTED OTHERWISE
FT.	FOOT OR FEET	VERT.	VERTICAL
FUT.	FUTURE	W	WEST
G.C.	GENERAL CONTR.	W/	WITH
G.F.	GROUND FACE	WP.	WATERPROOF
GND.	GROUND	WT.	WEIGHT
GR.	GRADE OR GRADING		
GV.	GAS VENT		

## ABBREVIATIONS

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ACCEPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:

- 2010 CALIFORNIA BUILDING CODE, VOLS. 1 & 2
- 2010 CALIFORNIA RESIDENTIAL CODE
- 2010 CALIFORNIA PLUMBING CODE
- 2010 CALIFORNIA MECHANICAL CODE
- 2010 CALIFORNIA ELECTRICAL CODE
- 2010 ENERGY CODE
- 2010 GREEN BUILDING CODE
- 2010 CALIFORNIA FIRE CODE
- 2010 CALIFORNIA REFERENCE STANDARDS CODE

## CODE COMPLIANCE

<u>SITE PARCEL NO.:</u>	108-340-25-00
<u>JURISDICTION:</u>	COUNTY OF SAN DIEGO
<u>ZONE:</u>	A70
<u>OCCUPANCY:</u>	UNMANNED TELECOMMUNICATIONS FACILITY
<u>LATITUDE:</u>	33° 23' 55.09" N
<u>LONGITUDE:</u>	117° 10' 7.4" W
<u>ELEVATION:</u>	1120'
<u>LEGAL DESCRIPTION:</u>	PARCEL 1 OF PARCEL MAP 12968, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, OCTOBER 28 1983 AS FILE NO. 83-390759 OF OFFICIAL RECORDS.

## PROJECT DATA

<u>SITE ADDRESS:</u>	4230 WHITE LILAC RD. FALLBROOK, CA 92028
<u>OWNER:</u>	TROY CONNOR KENDALL FARMS 4230 WHITE LILAC ROAD
<u>CONTACT:</u>	TROY CONNOR (760) 731-9552, troyc@kendall-farms.com
<u>APPLICANT:</u>	VERIZON WIRELESS 15505 SAND CANYON AVE. BUILDING "D" 1ST FLOOR IRVINE, CA 92618 PHONE: (949) 286-7000
<u>CONTACTS:</u>	MILESTONE WIRELESS PROJECT MANAGER: EMANUEL HIGGINS 15205 PAYTON IRVINE, CA. 92620 PHONE: (323) 241-8519
<u>ARCHITECT:</u>	ACO ARCHITECTS, INC. 26170 ENTERPRISE WAY #600 LAKE FOREST, CA 92630 PHONE: (949) 716-9940 FAX: (949) 297-4788
<u>CONTACT:</u>	ANTHONY ORTALE (949) 716-9940

## PROJECT DIRECTORY

## SHEET INDEX

REV:	DATE/BY:	REVISION DESCRIPTION:
3	05-02-11 MY	CLIENT REVISIONS
4	05-06-11 RS	CLIENT REVISIONS
5	08-22-11 MY	CLIENT REVISIONS
6	06-20-12 TW	CLIENT REVISIONS
7	10-15-12 DN	COUNTY COMMENTS

CONSULTANT:



8941 ATLANTA AVENUE, #504  
HUNTINGTON BEACH, CA. 92646

SITE BUILDER:



15505 SAND CANYON AVE.  
BUILDING "D" 1ST FLOOR  
IRVINE, CA. 92618  
PHONE (949) 286-7000

A/E DEVELOPMENT:



26170 ENTERPRISE WAY #600  
LAKE FOREST, CA 92630  
TEL: 949-716-9940  
FAX: 949-297-4788

ENGINEER:

SITE INFO:
SITE NAME: I-15 EAST MISSION ROAD
SITE ADDRESS: 4230 WHITE LILAC RD. FALLBROOK, CA 92028

SHEET TITLE:

## TITLE SHEET

DRAWING INFO:

DWG. NAME: TI	DRAWN BY: MY	DATE: 10-20-09
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SHEET NUMBER:

SDC PDS RCVD 12-04-12 ZAP00-112W1	T-1
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NOTES:

- 1 NEW VERIZON WIRELESS 30 KW KOHLER EMERGENCY BACKUP GENERATOR, WITH A 150 GALLON DIESEL FUEL TANK, MOUNTED ON A NEW 5'-0" X 8'-0" CONCRETE SPILL CONTAINMENT PAD LOCATED OUTSIDE EXISTING LEASE PREMISES. SEE SHEET A-2 FOR DETAILED SITE PLAN.
- 2 EXISTING VERIZON WIRELESS 13'-4" X 25'-4" EQUIPMENT SHELTER AND LOCATION OF NEW VERIZON WIRELESS WALL MOUNTED AUTOMATIC TRANSFER SWITCH.
- 3 EXISTING VERIZON WIRELESS 35' HIGH MONOPALM WITH (4) PANEL ANTENNAS PER SECTOR, (2) SECTORS, (8) ANTENNAS TOTAL.
- 4 EXISTING VERIZON WIRELESS UTILITY TRENCH WITH 3' WIDE UTILITY EASEMENT.
- 5 EXISTING DIRT ROAD.
- 6 EXISTING GRASS/DIRT AREA.
- 7 EXISTING IRR. RESERVOIR.
- 8 EXISTING HOUSE.
- 9 EXISTING EQUIPMENT SHELTER BY OTHERS. CASE NUMBER (ZAP02-015).
- 10 EXISTING MONOPINE BY OTHERS.

NOTE:  
THE PROPOSED GENERATOR UNIT SHALL INCORPORATE THE MANUFACTURER SOUND ENCLOSURE DESIGN AS RECOMMENDED IN THE NOISE REPORT PREPARED BY EILAR ASSOCIATES DATED NOVEMBER 9, 2010.

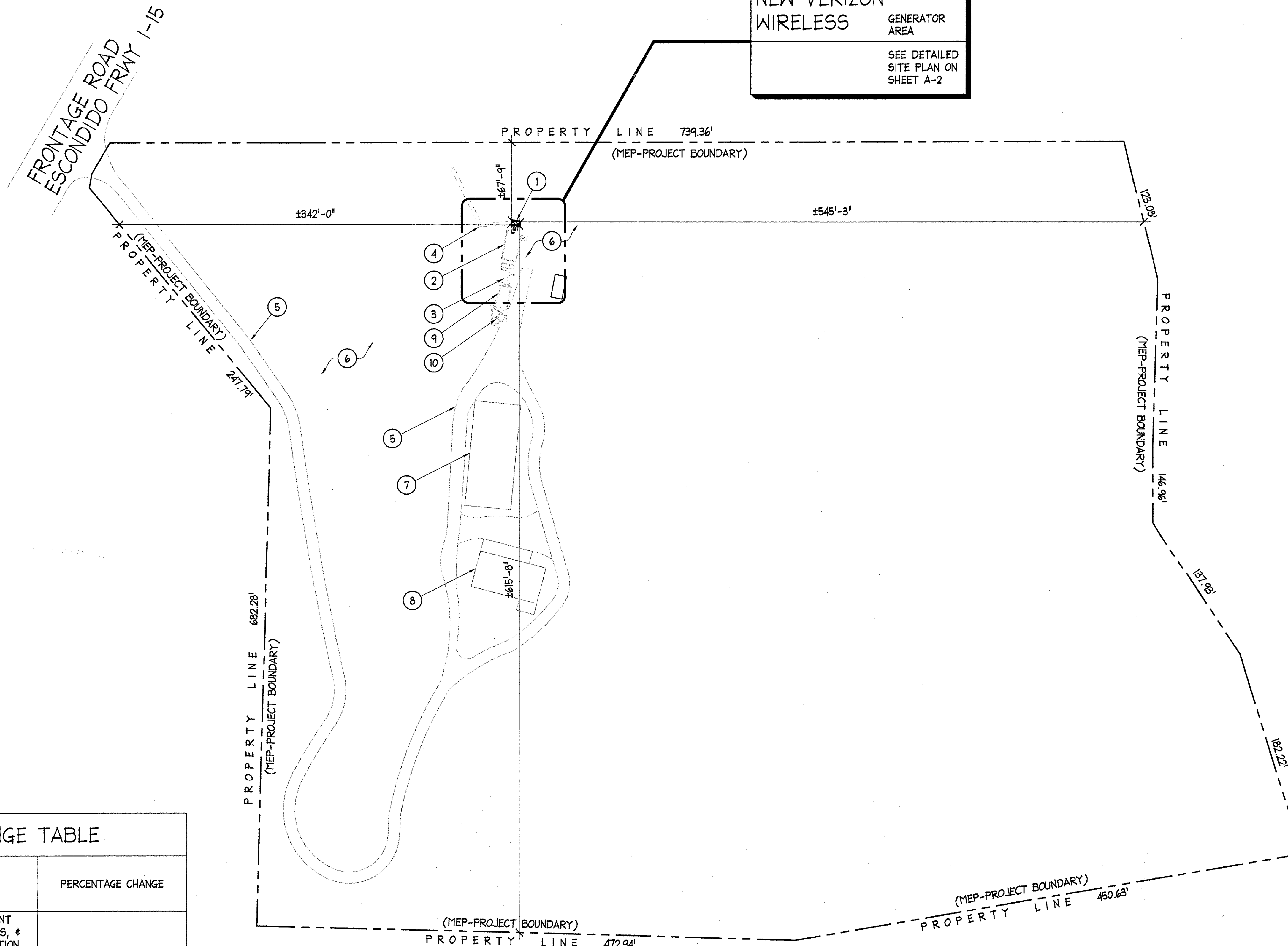
CUMULATIVE CHANGE TABLE

APPROVED SQUARE FOOTAGE	DESCRIPTION	PERCENTAGE CHANGE
± 388 SQ. FT.	(E) VZW EQUIPMENT SHELTER, A/C UNITS, & MONOPOLE FOUNDATION	
± 200 SQ. FT.	(E) EQUIPMENT SHELTER BY OTHERS	
TOTAL ±588 SQ. FT.		
PROPOSED ± 40 SQ. FT.	NEW GENERATOR WITH ENCLOSURE	PLUS 6.8 %

NEW VERIZON  
WIRELESS

GENERATOR  
AREA

SEE DETAILED  
SITE PLAN ON  
SHEET A-2



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CONSULTANT:

**milestone**  
wireless

8941 ATLANTA AVENUE, #504  
HUNTINGTON BEACH, CA. 92646

SITE BUILDER:

**verizon**wireless

15505 SAND CANYON AVE.  
BUILDING 'D' 1st. FLOOR  
IRVINE, CA. 92618  
PHONE (949) 286-7000

A/E DEVELOPMENT:

**ACO**  
ARCHITECTS - INC.

26170 ENTERPRISE WAY #600  
LAKE FOREST, CA 92630  
TEL: 949-716-9940  
FAX: 949-297-4788

ENGINEER:

SITE INFO:

SITE NAME:  
1-15  
EAST MISSION ROAD

SITE ADDRESS:  
4230 WHITE LILAC RD.  
FALLBROOK, CA 92028

SHEET TITLE:

SITE PLAN

DRAWING INFO:

DWG. NAME: AI  
DRAWN BY: MY  
DATE: 10-20-09

SHEET NUMBER:

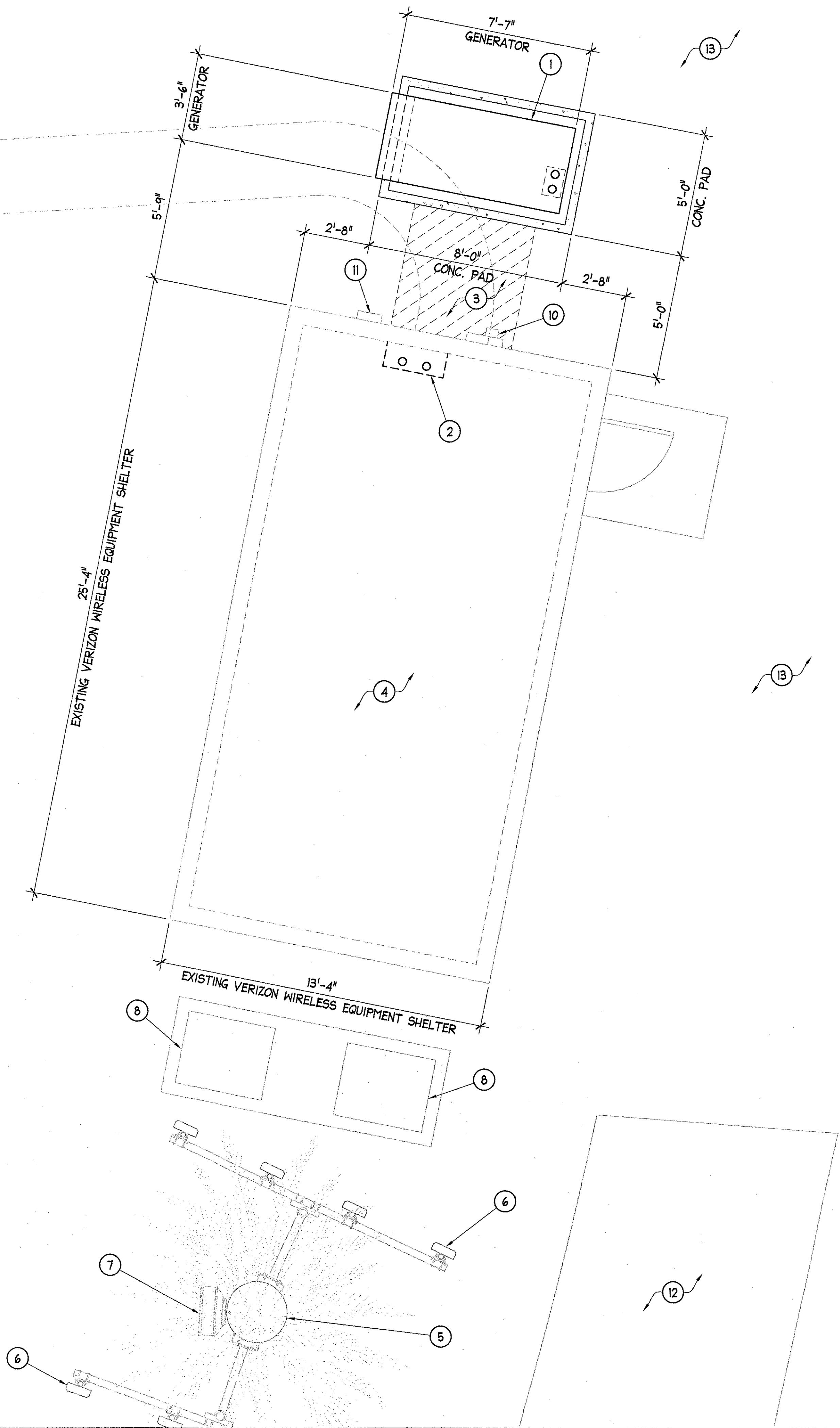
A-1



NOTES:

- ① NEW VERIZON WIRELESS 30 KW KOHLER EMERGENCY BACKUP GENERATOR, WITH A 150 GALLON DIESEL FUEL TANK, MOUNTED ON A NEW 5'-0" X 8'-0" CONCRETE SPILL CONTAINMENT PAD LOCATED OUTSIDE EXISTING LEASE PREMISES.
- ② NEW VERIZON WIRELESS WALL MOUNTED AUTOMATIC TRANSFER SWITCH LOCATED INSIDE EXISTING VERIZON WIRELESS EQUIPMENT SHELTER. CONTRACTOR TO VERIFY IN FIELD FOR EXACT MOUNTING LOCATION.
- ③ NEW VERIZON WIRELESS 5' WIDE NON-EXCLUSIVE UTILITY EASEMENT (SHOWN HATCHED).
- ④ EXISTING VERIZON WIRELESS 13'-4" X 25'-4" EQUIPMENT SHELTER AND LOCATION OF NEW VERIZON WIRELESS WALL MOUNTED AUTOMATIC TRANSFER SWITCH.
- ⑤ EXISTING VERIZON WIRELESS 35' HIGH MONOPALM.
- ⑥ EXISTING VERIZON WIRELESS (4) PANEL ANTENNAS PER SECTOR, (2) SECTORS, (8) ANTENNAS TOTAL, MOUNTED ON EXISTING MONOPALM.
- ⑦ EXISTING VERIZON WIRELESS 2' DIA. PARABOLIC ANTENNA MOUNTED ON EXISTING MONOPALM.
- ⑧ EXISTING VERIZON WIRELESS A/C UNITS MOUNTED ON RAISED CONCRETE PAD. (TO REMAIN).
- ⑨ EXISTING VERIZON WIRELESS UTILITY TRENCH WITH 3' WIDE UTILITY EASEMENT.
- ⑩ EXISTING VERIZON WIRELESS WALL MOUNTED ELECTRICAL METER.
- ⑪ EXISTING VERIZON WIRELESS WALL MOUNTED LUG BOX.
- ⑫ EXISTING ACCESS ROAD.
- ⑬ EXISTING GRASS/DIRT AREA.

NOTE:  
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**milestone**  
wireless

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FAX: 949-297-4788

ENGINEER:

SITE INFO:

SITE NAME:  
1-15  
EAST MISSION ROAD

SITE ADDRESS:  
4230 WHITE LILAC RD.  
FALLBROOK, CA 92028

SHEET TITLE:

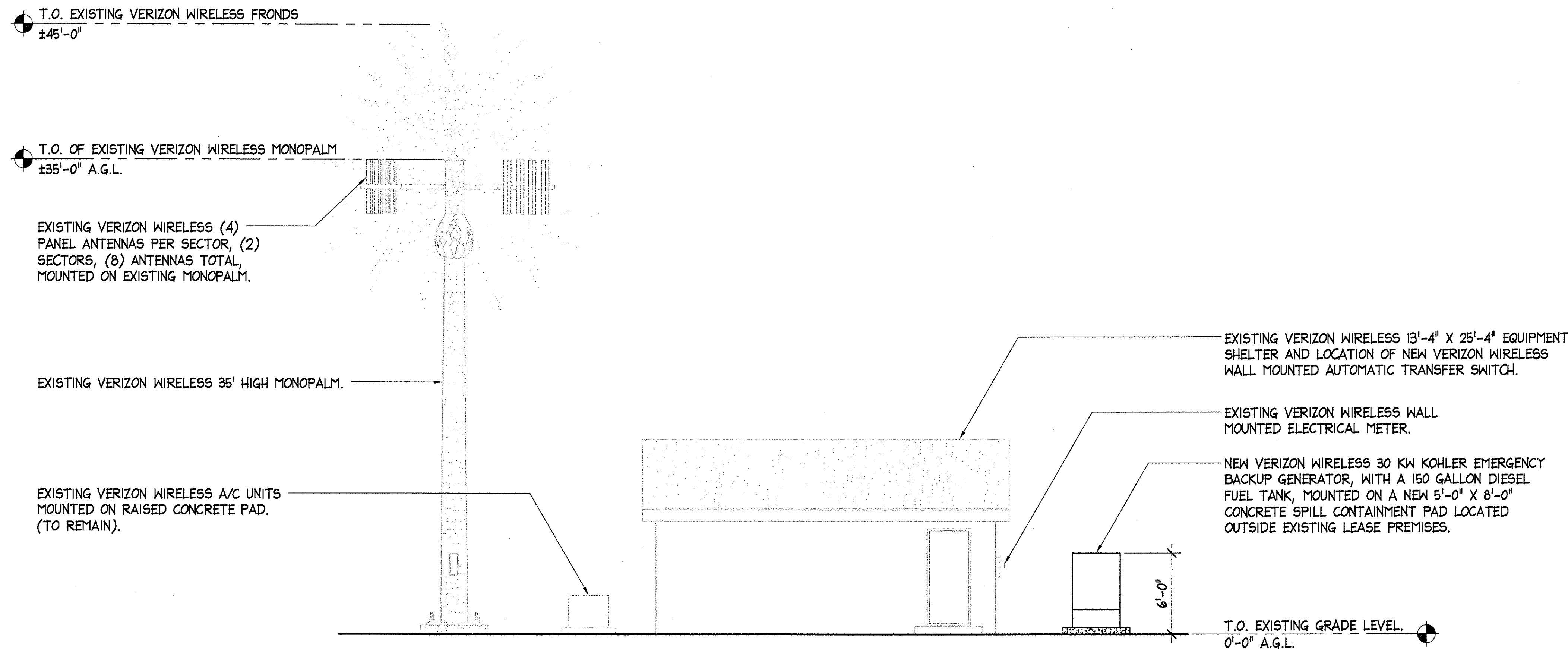
DETAILED  
SITE PLAN

DRAWING INFO:

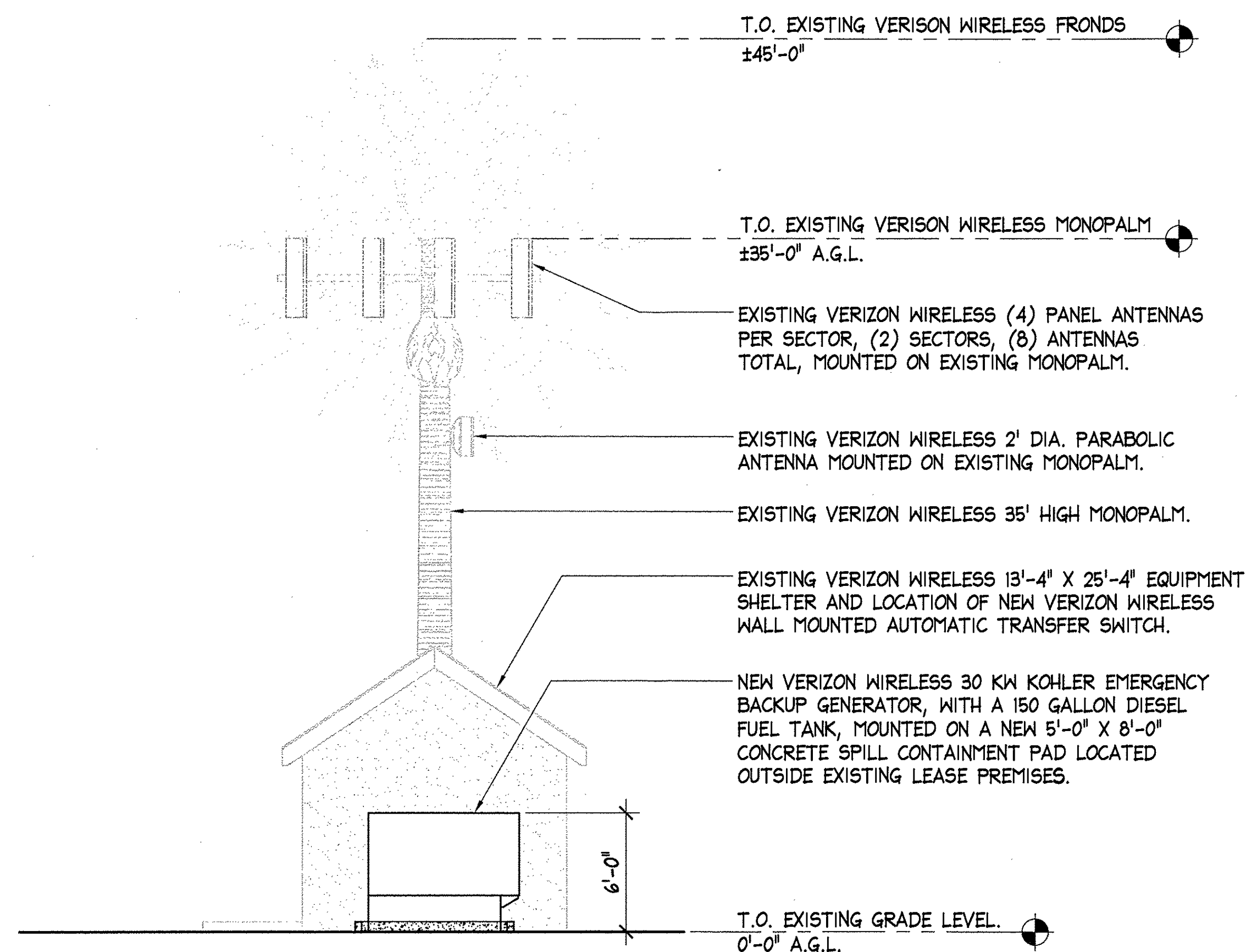
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SHEET NUMBER:

A-2



EAST ELEVATION



NORTH ELEVATION

REV.	DATE/BY:	REVISION DESCRIPTION:
3	05-02-11 MY	CLIENT REVISIONS
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CONSULTANT:

**milestone**  
wireless

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HUNTINGTON BEACH, CA. 92646

SITE BUILDER:

**verizon**wireless

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ENGINEER:

SITE INFO:

SITE NAME:  
1-15  
EAST MISSION ROAD

SITE ADDRESS:  
4230 WHITE LILAC RD.  
FALLBROOK, CA 92028

SHEET TITLE:

ARCHITECTURAL  
ELEVATIONS

DRAWING INFO:

DWG. NAME: A3	DRAWN BY: MY	DATE: 10-20-09
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SHEET NUMBER:

A-3

REV:	DATE/BY:	REVISION DESCRIPTION:
3	05-02-11 MY	CLIENT REVISIONS
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CONSULTANT:



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HUNTINGTON BEACH, CA. 92646

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A/E DEVELOPMENT:



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TEL: 949-716-9940  
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SITE INFO:

SITE NAME:  
1-15  
EAST MISSION ROAD  
SITE ADDRESS:  
4230 WHITE LILAC RD.  
FALLBROOK, CA 92028

SHEET TITLE:

GENERATOR  
SPECIFICATIONS

DRAWING INFO:

DWG. NAME:	DRAWN BY:	DATE:
A4	MY	10-20-09

SHEET NUMBER:

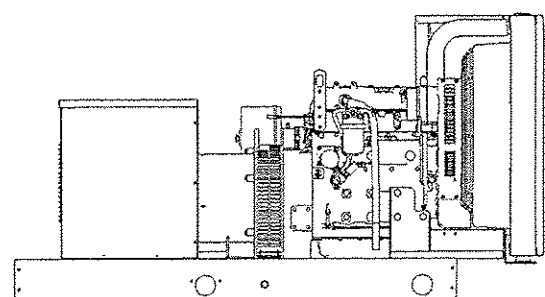
A-4

NOT USED

SCALE: N.T.S.

2  
A-4

Model: 30REOZJC-VER  
KOHLER POWER SYSTEMS Diesel



Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set is UL 2200 listed.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- The generator set complies with ISO 8528-5, Class G2, requirements for transient performance.
- The generator set engine is certified by the Environmental Protection Agency (EPA) to conform to interim Tier 4 nonroad emissions regulations.
- A five-year basic limited warranty covers all systems and components.
- The unique Fast-Response™ II excitation system delivers excellent voltage response and short circuit capability using a permanent magnet (PM)-excited alternator.
- The low coolant level shutdown prevents overheating.
- Integral vibration isolation eliminates the need for under-unit vibration spring isolators.

Generator Set Ratings

Alternator	Voltage	Ph	Hz	105°C Rise Standby Rating kW/kVA	Amps
4P5	120/208	3	60	30/38	104
4Q5	120/240	1	60	30/30	125

NOTES: All three phase units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. Standby Rating: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads to the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO 3046-1, BS 5414, AS 2793, and DIN 6271. Prime Power Rating: Prime power ratings apply to installations where utility power is unavailable or unreliable. An approved, full-rated generator set operating hour is verified. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO 3046-1, BS 5414, AS 2793, and DIN 6271. For limited running time and base load ratings, contact the factory. Consult the technical information bulletin (TIB 101) on design guidelines for the complete design details. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. GENERAL GUIDELINES FOR DERATION: Altitude: Decrease 0.5% per 100 m (328 ft) elevation above 2100 m (6896 ft). Temperature: Decrease 1.0% per 1°C (1.8°F) temperature above 35°C (95°F).

G6-337 (30REOZJC-VER) 1/09

Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
Material	Class H
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Armature windings	Full
Voltage regulation, no-load to full-load	±1% Average
One-step load acceptance	100% of Rating
Unbalanced load capability	100% of Rated Standby Current
Peak motor starting kVA:	(35% dip for voltages below)
208 V 4P5	121
240 V 4Q5	95

Application Data

Engine	Engine Specifications
Manufacturer	John Deere
Engine model	4024TF281
Engine type	4-Cycle, Turbocharged
Cylinder arrangement	4 Inline
Displacement, L (cu. in.)	2.4 (149)
Bore and stroke, mm (in.)	86 x 105 (3.39 x 4.13)
Compression ratio	20.5:1
Piston speed, m/min. (ft./min.)	375 (1230)
Main bearings: quantity, type	5, Replaceable Insert
Rated rpm	1800
Max. power at rated rpm, kW/m (BHP)	36 (49)
Cylinder head material	Cast Iron
Crankshaft material	Ductile Iron
Valve material:	
Intake	Chromium-Silicon Steel
Exhaust	Stainless Steel
Governor: type, make/model	Electronic, Stanadyne/Unit Pump
Frequency regulation, no-load to full-load	Isynchronous
Frequency regulation, steady state	±0.25%
Frequency	Fixed
Air cleaner type, all models	Dry

Exhaust	Exhaust System
Exhaust manifold type	Dry
Exhaust flow at rated kW, m³/min. (cfm)	8.0 (283)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	552 (1026)
Maximum allowable back pressure, kPa (in. Hg)	7.5 (2.2)
Exhaust outlet size at engine hookup, mm (in.)	63.5 (2.5)

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and drip-proof construction.
- Vacuum-impregnated windings with fungus-resistant epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.
- Fast-Response™ II brushless alternator with brushless exciter for excellent load response.

Engine Electrical

Engine Electrical	Engine Electrical System
Battery charging alternator:	Negative
Ground (negative/positive)	12
Volts (DC)	70
Ampere rating	12
Starter motor rated voltage (DC)	Battery, recommended cold cranking amps (CCA).
Battery, recommended cold cranking amps (CCA):	Quantity, CCA rating
Battery voltage (DC)	One, 640
	12

Fuel

Fuel	Fuel System
Fuel supply line, min. ID, mm (in.)	11.0 (0.44)
Fuel return line, min. ID, mm (in.)	6.0 (0.25)
Max. lift, engine-driven fuel pump, m (ft)	3.0 (10.0)
Max. fuel flow, Lph (gph)	99 (26.1)
Fuel prime pump	Manual
Fuel filter	
Secondary	5 Microns @ 98% Efficiency
Water Separator	Yes
Recommended fuel	#2 Diesel

Lubrication

Lubrication System	Lubricating System
Type	Full Pressure
Oil pan capacity, L (qt.)	7.3 (7.7)
Oil pan capacity with filter, L (qt.)	8.2 (8.7)
Oil filter: quantity, type	1, Cartridge
Oil cooler	Water-Cooled

Application Data

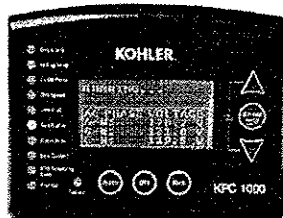
Cooling	Radiator System
Ambient temperature, °C (°F)	50 (122)
Engine jacket water capacity, L (gal.)	2.6 (0.7)
Radiator system capacity, including engine, L (gal.)	11.4 (3.0)
Engine jacket water flow, Lpm (gpm)	91 (24)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	24.8 (1412)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	597 (23.5)
Fan, kW/m (HP)	2.9 (3.9)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H <sub>2</sub> O)	0.125 (0.5)

Operation Requirements

Air Requirements	Radiator-cooled cooling air, m³/min. (acfm):
Cooling air required for generator set when equipped with dry water cooling or remote radiator, based on 14°C (25°F) rise and ambient temp. of 29°C (85°F), m³/min. (cfm)	96 (3400)
Combustion air, m³/min. (cfm)	48 (1700)
Heat rejected to ambient air:	3.0 (106)
Engine, kW (Btu/min.)	8.6 (490)
Alternator, kW (Btu/min.)	4.4 (250)
± Air density = 1.20 kg/m³ (0.075 lbm/ft³)	
Fuel Consumption	Diesel, Lph (gph) at % load
Standby Rating	
100%	10.6 (2.8)
75%	8.0 (2.1)
50%	5.8 (1.5)
25%	3.9 (1.0)

KOHLER CO., Kohler, Wisconsin 53044 USA  
Phone 920-565-3381, Fax 920-459-1646  
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444  
KohlerPower.com

Controller



KPC 1000 Controller Features

- Audiovisual annunciation with NFPA 99 and NFPA 110 capability
- Multi-line digital data display and keypad to access data
- 12- or 24-volt DC engine electrical system capability
- Graphic liquid crystal display (LCD) with 128 x 64 pixel resolution and backlighting
- Sealed six-button keypad
- Ten bi-color (yellow warning and red shutdown) fault or green status indicating LED lights
- Red failure (fault) shutdown LED
- Three-button master switch: Auto, Off (Reset), Run
- Alarm horn with silence switch function
- Upgradeable application code
- RS-485 connector for serial data communication
- Password-protected programming mode
- PC Interface Software for monitoring, adjustment, and upgrades
- Faults:
  - Auxiliary fault
  - High engine temperature
  - Low cranking voltage
  - Low oil pressure
  - Low coolant level
  - Overcrank
  - Overload
  - Overvoltage
  - Undervoltage
  - Overfrequency
  - Underfrequency
  - Low battery voltage
  - High battery voltage

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GENERATOR SPECIFICATIONS

SCALE: N.T.S.

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